

Listing of Claims:

1. (Currently Amended) An optical switch comprising:
optical-path switching elements for switching one optical path to another optical path to allow one light beam for optical communication emitted from one of at least one input optical fiber used for inputting beams, to be incident on one of at least one output optical fiber from which beams are outputted;

5 a photo-sensor which comprises a four-divided photodetector light receiving surface;

10 light guiding means for guiding the beam to the photo-sensor; and

control means for controlling an angle of each of the optical-path switching elements based on a detection signal obtained through the photo-sensor.

2. (Previously Presented) The optical switch according to Claim 1, wherein each of the optical-path switching elements includes a galvanometer mirror.

3. (Currently Amended) The optical switch according to Claim [[1]] 6, wherein the light guiding means is adapted to guide a light beam transmitted through at least one of the optical-path switching elements to the photo-sensor.

4. (Currently Amended) The optical switch according to
Claim [[3]] 1, wherein the light guiding means is adapted to
guide a light beam transmitted through at least one of the
optical-path switching elements to the photo-sensor, and the
5 light guiding means is adapted to split the light beam
transmitted through at least one of the optical-path switching
elements using a beam splitter and then to guide a beam split
from the light beam to the photo-sensor.

5. (Currently Amended) The An optical switch according to
claim 3, wherein the comprising:

optical-path switching elements for switching one optical
path to another optical path to allow one light beam for optical
5 communication emitted from one of at least one input optical
fiber used for inputting beams, to be incident on one of at least
one output optical fiber from which beams are outputted;

10 light guiding means includes the photo-sensor, which
comprises (i) for guiding a light beam transmitted through at
least one of the optical-path switching elements, the light
guiding means comprising a base having a hole through which the
light beam being transmitted through at least one of
the optical-path switching elements passes, and (ii) at least two
light receiving elements

15 a photo-sensor, which comprises a plurality of photo-sensor sections which are disposed around the hole in the base; and control means for controlling an angle of each of the optical-path switching elements based on a detection signal obtained through the photo-sensor.

6. (Currently Amended) ~~The An~~ optical switch according to
~~claim 1, comprising:~~

optical-path switching elements for switching one optical path to another optical path to allow one light beam for optical communication emitted from one of at least one input optical fiber used for inputting beams, to be incident on one of at least one output optical fiber from which beams are outputted;

a photo-sensor;

light guiding means for guiding the beam to the

10 photo-sensor; and

control means for controlling an angle of each of the optical-path switching elements based on a detection signal obtained through the photo-sensor;

wherein the light guiding means is adapted to partially split a light beam transmitted through the output optical fiber and to allow the photo-sensor to receive a beam split from the light beam.

7. (Currently Amended) The optical switch according to Claim 6, wherein the light guiding means comprises:

~~the output optical fiber for capturing a light beam transmitted through at least one of the optical path switching elements,~~

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a photocoupler which is disposed on an output terminal of the output optical fiber and which splits the beam into a beam for the photo-sensor and a beam for communication; and

10 a sensor fiber for guiding the split beam for the

photo-sensor to the photo-sensor,

wherein each optical-path switching element is adapted to be oscillated when a driving signal with a predetermined frequency is supplied thereto.

8. (Previously Presented) The optical switch according to Claim 7, wherein each of the optical-path switching elements is adapted to be oscillated in two directions.

9. (Currently Amended) The optical switch according to Claim 8, wherein the driving signal comprises driving signals to be supplied to each of the optical-path switching elements, and the driving signals have different frequencies so that the optical-path switching elements are enabled to be oscillated in the two directions.

10. (Currently Amended) An optical switch comprising:
optical-path switching elements for switching at least one
optical path to another optical path to allow one light beam for
optical communication emitted from one of at least one input
5 optical fiber used for inputting beams, to be incident on one of
at least one output optical fiber from which beams are outputted;
a photo-sensor which comprises a four-divided photodetector
light receiving surface;

10 light guiding means for guiding the beam to the
photo-sensor; and

control means for adjusting an angle of each of the
optical-path switching elements based on a detection signal
obtained through the photo-sensor to adjust at least one of a
relative position and an angle of the beam.

11. (New) An optical switch comprising:
optical-path switching elements for switching one optical
path to another optical path to allow one light beam for optical
communication emitted from one of at least one input optical
5 fiber used for inputting beams, to be incident on one of at least
one output optical fiber from which beams are outputted;
a photo-sensor;

light guiding means for guiding a light beam transmitted through at least one of the optical-path switching elements to
10 the photo-sensor; and

control means for controlling an angle of each of the optical-path switching elements based on a detection signal obtained through the photo-sensor;

wherein the light guiding means is adapted to split the
15 light beam transmitted through at least one of the optical-path switching elements using a hologram and then to guide a beam split from the light beam to the photo-sensor.

12. (New) An optical switch comprising:

optical-path switching elements for switching one optical path to another optical path to allow one light beam for optical communication emitted from one of at least one input optical
5 fiber used for inputting beams, to be incident on one of at least one output optical fiber from which beams are outputted;

a photo-sensor;

light guiding means for guiding a light beam transmitted through at least one of the optical-path switching elements to
10 the photo-sensor;

a lens through which the light beam transmitted through at least one of the optical-path switching elements is converged onto the output optical fiber; and

control means for controlling an angle of each of the
15 optical-path switching elements based on a detection signal
obtained through the photo-sensor;

wherein the light guiding means is adapted to split the
light beam transmitted through at least one of the optical-path
switching elements using a beam splitter and then to guide a beam
20 split from the light beam to the photo-sensor, and wherein the
beam splitter is provided in the lens.